

REMARKS

Status of the Prosecution:

Claims 1-13 and 17 are pending and presently under examination. Claims 5 and 9 have been canceled herein without prejudice, along with previously withdrawn claims 14-16 and 18-34. Applicants reserve the right to pursue these claims in continuations or divisional applications.

Claims 1, 7, 8, 10, 11, and 17 have been amended. Amendments to claims 1, 7 and 10 are to clarify by removing the reference to human β 1A sodium channel subunit, thus emphasizing, for example, the limitation relating to "encoding SEQ ID NO:14". These amendments are not narrowing, but address the concerns expressed in the Office Action.

The amendments do place the claim in condition for allowance and also narrow the issues for any necessary appeals. Their entry is therefore respectfully requested.

Claims 11, 13, and 17 are Directed to Subject Matter Which is Fully Enabled

Claims 11, 13, and 17 stand rejected under 35 U.S.C. § 112, first paragraph as allegedly directed to subject matter which was not fully enabled. In particular the Office Action asserts that only human β 1A sodium channel subunit having SEQ ID NO:14 are enabled, and that one cannot predictably alter even a single amino acid in the amino acid sequence presented in SEQ ID NO:14.

Claims as amended do not require any alteration of the amino acid sequence provided in SEQ ID NO:14, and thus are fully enabled. Accordingly, the Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. § 112, first paragraph for lack of enablement.

The Claims are Definite Within the Meaning of 35 U.S.C. § 112, second paragraph.

Claims 1 to 13 and 17 stand rejected as allegedly indefinite under 35 U.S.C. § 112, second paragraph for failing to particularly point out and distinctly claim the subjected regarded as the invention. The Office Action alleges that the term "Human β 1A sodium channel subunit" does not identify properties or combinations of properties definitive of human β 1A sodium channel subunits. The Applicants' prior citation of page 13 in the specification was not found persuasive, the Office Action states that the term "human β 1A sodium channel subunit" is not found on that page. Applicants respectfully note for the record that the definition on page 13 refers to "Human VCSC β 1A subunit" as the Office Action states. This would clearly be understood by the skilled artisan reading the specification to mean the "human voltage-gated sodium channel β 1A subunit" (see page 1 and throughout for the abbreviation VGSC) or the "human β 1A sodium channel subunit" as is used throughout the specification. The skilled artisan would thus clearly understand that the term refers to a protein that functions specifically as a channel subunit, 35 U.S.C. § 112, second paragraph requires nothing more.

Notwithstanding the above, in order to advance prosecution, Applicants have removed all reference to "human β 1A sodium channel subunit" and therefore the grounds of the rejection no longer are present. Accordingly, reconsideration is respectfully requested. Withdrawal of the rejection under 35 U.S.C. § 112, second paragraph is appropriate in view of the above.

Claim 1 stands rejected under 35 U.S.C. § 112, first paragraph as allegedly indefinite for reciting the term

"sequence" instead of polynucleotide. It is respectfully submitted that a "sequence" is a term of art, and not at all confusing. It is universally recognized and understood, even the Patent and Trademark Office requires that a "Sequence Listing" be submitted along with applications disclosing such sequences.

In an effort to advance prosecution, however, the Applicants have replaced the allegedly indefinite term "sequence" with the suggested term "polynucleotide" and respectfully request reconsideration and withdrawal of the rejection to claim 1. as well as claims 2 to 4, and 6 dependent thereon under 35 U.S.C. § 112, second paragraph. As noted above claim 5 has been canceled.

Claims 5, 8 and 11 stand rejected under 35 U.S.C. § 112, second paragraph as allegedly indefinite because the metes and bounds of the terms "allelic variants" and "functional derivative" are not known. To the extent the rejection applied to claim 5, it is moot of view of the cancellation of that claim. Claims 8 and 11 have each been amended to remove the recitation of "allelic variant" and "functional derivative". Since the grounds of the rejection no longer exist, withdrawal of the rejection under 35 U.S.C. § 112, second paragraph is appropriate. Applicants respectfully request reconsideration in view of the foregoing, and withdrawal of the rejection with respect to claims 8 and 11, and claims dependent thereon.

Conclusion:


The above is believed to be fully responsive to the outstanding Office Action. The amendments herein places all claims in condition for allowance. Entry of the amendments

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and an early and favorable response are therefore earnestly solicited. The examiner is invited to contact the Applicants' undersigned representative to resolve any outstanding issues.

Respectfully submitted,


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